

**REMARKS**

In the Office Action, claims 25-50 were rejected. By the present response, claims 25, 29 and 46 are amended. Upon entry of the amendments, claims 25-50 will be pending in the present patent application. Reconsideration and allowance of all pending claims are requested.

**Rejections Under 35 U.S.C. §112**

Claims 25-50 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Independent claims 25, 29 and 46 have been amended by the present response.

Amended claim 25 recites *inter alia* providing a capillary at a ground location where a chemical species is suspected to be present. A fluid medium is delivered into a space inside a capillary and the fluid medium is allowed to reside in the capillary without being removed. As described in the application, a chemical species is allowed to permeate through the wall of the capillary. Then, the capillary content (fluid medium) is transferred to the sensing element of the detector. A magnitude of a characteristic of the chemical species is detected and measured, and related to an amount of the chemical species. Further, the time of detection of the characteristic is measured and related to a relative location of the chemical species in the capillary content (fluid medium). The relative location of the chemical species in the capillary content is used as an indication of the ground location of the chemical species.

Amended claims 29 and 46 recite, *inter alia*, providing a capillary at a ground location where a chemical species is suspected to be present. A fluid medium is delivered into a space inside a capillary and the fluid medium is allowed to reside in the capillary without being removed here again, as described in the application, a chemical species is allowed to permeate through the wall of the capillary and allowed to react with the reagent in the fluid medium to yield an optically detectable interaction product. Then, the

capillary content (fluid medium) is transferred to the sensing element of the detector. A magnitude of an optical signal resulting from the presence of the optically detectable interaction product is detected and measured, and related to an amount of the chemical species. Further, the time of detection of the optical signal is measured and related to a relative location of the chemical species in the capillary content (fluid medium). The relative location of the chemical species in the capillary content is used as an indication of the ground location of the chemical species.

As indicated in paragraphs 22 and 26 of the application, the present technique provides an indication of ground location of chemical species based on the relative location of the chemical species in the capillary content. The relative location of the chemical species in the capillary content medium is related to the time at which the characteristic (optical signal, if present) is measured as recited in amended claims 25, 29 and 46. Consequently, amended claims 25, 29 and 46 and their dependent claims 26-28, 30-45, and 47-50 are believed to be in condition for allowance for the reasons summarized above. Consideration and allowance of the new claims are requested.

**Rejections Under 35 U.S.C. §102(b)**

Claims 25-39, 46 and 48-50 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,434,084 (hereinafter "Burgess").

Applicants respectfully note that the claims 25, 29 and 46 had been previously amended to recite that in the present technique a sufficient residence time is allowed for the fluid medium to reside in the capillary. The residence time is provided to allow sufficient time for a chemical species to permeate through the walls of the capillary and to react with a reagent (if present) in the fluid medium before transferring to the sensing element of the detector.

Burgess teaches a device that delivers reagent to a sensor probe in a continuous flow method that directly and *continuously* renews the reagent. The flow method allows for continuous measurement of the presence of an analyte. However, Burgess does not teach a device in which a fluid is stopped from flowing to provide sufficient residence time for the chemical species to permeate the capillary wall and to react with a reagent in the fluid medium. The Examiner acknowledged in the Office Action that Burgess only teaches a continuous flow system. Consequently, claims 25-3, 46 and 48-50 are not anticipated by Burgess, and are believed to be in condition for allowance for the reasons summarized above. Consideration and allowance of the new claims are requested.

**Rejections Under 35 U.S.C. §103(a)**

Claims 40-45 were rejected under 35 U.S.C. §102(b) as being unpatentable over U.S. Patent No. 5,434,084 (hereinafter "Burgess") in view of various secondary references.

Applicants respectfully traverse the rejection of claims 40-45 under 35 U.S.C. §103(a) for the reasons noted hereinabove. Specifically, claims 40-45 are dependent on independent claim 29. Applicants note that the claim 29 had been previously amended to recite that in the present technique a sufficient residence time is allowed for the fluid medium to reside in the capillary. Burgess teaches a device that delivers reagent to a sensor probe in a continuous flow method that directly and continuously renews the reagent. The secondary references do not obviate this deficiency in Burgess. Accordingly, Burgess alone or in combination with other references does not teach a device in which a sufficient residence time is allowed for the chemical species to permeate the capillary wall and to react with a reagent in the fluid medium.

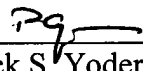
Consequently, claims 25-3, 46 and 48-50 are believed to be in condition for allowance for the reasons summarized above. Consideration and allowance of the new claims are requested.

**Conclusion**

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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